The World Made Web:

What service will look like after IoT

Technology profile report 2016

FIELD SERVICE

WBR DIGITAL

Executive Summary

First introduced as a term in the late nineties, the Internet of Things is a concept that can be difficult to fully appreciate due to the scale of applications it could enable. Essentially referring to the integration of devices that interact with and gather information from the physical world into digital networks, field service is just one area where technology has the potential to be completely disruptive in the not so distant future.

Due to the nature of the field service model, which revolves around monitoring the condition and performance of remote, often highly complex products, the Internet of Things is particularly promising. This paper will define the technology, as well as enumerate some of its practical uses in the field today and in the near future.

The following report was prepared using data gained from research conducted on site at Field Service USA 2015, and contains citations from both benchmark survey results and on-site interviews with event attendees featured in the report *"The Human Side of Field Service: Training and Outfitting the Tech of the Future"*.

Defining the technology:
What exactly is the Internet of Things?

More and more devices are now able to use sensors and electronics to gather information about the physical world, then communicate that information to other smart devices and control centers in real-time or close to real-time.

IoT is blurring the lines between the physical and digital.

By allowing networks to react to physical information gathered by connected devices, IoT creates the means for a new level of service, where products in the field are able to constantly report home on their conditions, and trigger actions between individual machines or components.

The implications of IoT for field service are huge.

With the full integration of products into the IoT, the traditional break-fix approach to field service will be replaced with a predictive approach, where products alert when they need to be serviced before downtime ever occurs. Beyond this, a machine can interact with others in the network to provide a complete picture of the system it plays part in, ushering in an era of knowledge around customer needs that could disrupt the industry.

The Internet of Things (IoT) is a term used to describe the interplay of connected devices with each other as well as the physical world via information exchanged over networks.

What IoT looks like today -
and where it's going

Sculpting the role of the technician

The implications of the IoT are already being felt in the service landscape. The greater the integration of objects that can report on their status into digital networks, the more able a technician will be to follow a procedural approach to repairs, as opposed to diagnosing an unknown malfunction. On the one hand, this has the potential to reduce the necessary skill levels of a large group of technicians. On the other hand, it will elevate these among technicians who will be responsible for repairing the complex sensors and wired systems that connect an object to a digital network. In some cases, there will be divergence of these two roles, while in others, a consolidation and the creation of a master class of field technicians.

Creating new opportunities for revenue

From emerging service opportunities such as the maintenance of ocean-based wind-farms, to more familiar exchanges between vending machines or printing equipment, more data means better, more optimized service. What many service professionals have already discovered is that customer satisfaction is a key differentiator in service operations, and the potential to unlock vastly better outcomes that IoT presents will be closely examined by the industry going forward as a path to revenue growth and customer retention.

> There will be significantly more machine data identifying more accurately the issue and the repair process. Instead of reactive, we are transitioning to more predictive service, and we are already moving towards that reality. These calls will be scheduled based on machine data, with parts and procedures identified before the call increasing efficiency and reducing manpower requirements.

Arthur McGinn
Vice President of Service, Canon

From the 2015 Field Service USA Report "The Human Side of Field Service"
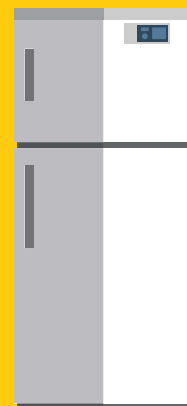
Enabling real-time remote diagnostics

Remote diagnostics are a major component of repairing complex machinery and systems. With the integration of IoT, metrics that would otherwise need to be manually evaluated can instantly report back to a diagnostic center, simultaneously. Going beyond diagnostics, a digital connection to the physical world can even enable self-repair on the component level, potentially eliminating the need for a visit altogether. With 68% of field service operations foreseeing a major role for wearable technology in their strategies, and 53% predicting full implementation of IoT in the next five to ten years, the technology is set to create a new standard for remote diagnostics and repair in the near future.

Which of these next generation tools do you think will be implemented on your team over the next 5-10 years?

68%
Wearable
Technology

53%
Full implementation
of the Internet
of Things

18%
Augmented
Reality

6%
Driverless
Cars

6%
3D
Printing

Coca-Cola's soft drink dispensing and vending technology is rapidly becoming more sophisticated. An example is our Freestyle fountain dispenser. It has an interactive screen, as well as micro-dosing pumps. This dispensing technology as well as the new technology being used across the industry in cashless vending requires higher levels of technical skill to maintain than what has been previously needed in our industry. This is driving the need for us to leverage technology to interact with the technician on site.

Ed Defraine
Regional Director for
Customer Care,
Coca-Cola

From the 2015 Field Service USA Report
"The Human Side of Field Service"

Creating a new level of product integration

One of the most exciting aspects of IoT is that beyond offering monitoring and data gathering on a component or machine level, connectivity allows individual objects to coordinate. The technology breaks down the barriers that would have existed between objects in a physical system, allowing them to account for and enhance their collective performance. Service operations will have the ability to drill down to components, and conversely, create a bird's eye view of a system that can be analyzed, and then optimized.

With 68% of field service operations foreseeing a major role for wearable technology in their strategies, and 53% predicting full implementation of IoT in the next five to ten years, the technology is set to create a new standard for remote diagnostics and repair in the near future.

Learn more about emerging service technology at:

Field Service USA 2016
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JW Marriott Desert Springs Resort & Spa
Palm Springs, CA

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The advantage of Field Service is that you get a window into top processes, people, tools and initiatives in the space. You have the opportunity to benchmark best practices and new ideas from a cross-industry.

Dick Frishkorn
GE Aircraft Engines

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